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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,756	04/03/2001	Takahiro Matsuda	826.1713	9121

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STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

HAMILTON, MONPLAISIR G

ART UNIT PAPER NUMBER

2135

DATE MAILED: 05/21/2004

11

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/823,756

Applicant(s)

MATSUDA ET AL.

Examiner

Monplaisir G Hamilton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/27/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 2 and 7-9 is/are allowed.
- 6) ☒ Claim(s) 1,3-6 and 10-14 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/23/04 has been entered.

The communication filed on 1/23/04 amended Claims 1, 2 and 7-14. Claims 1-14 remain for examination.

Response to Arguments

2. Applicant's arguments filed 1/23/04 have been fully considered but they are not persuasive.

Applicant argues that Lopresti does not disclose "reducing data in files including at least one of file deletion, data compaction, document summarization, and file saving."

Examiner disagrees with applicant. Lopresti discloses storage reduction means that can be applied to document images includes various compression schemes. Generally compression schemes may be either lossless compression or lossy compression (col 6, lines 55-65).

Furthermore, Lopresti discloses discarded data may include parts of a document, such as unimportant photos, or the entire document depending on the applicable storage preference rule

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(col 8, lines 25-40). These sections of Lopresti explicitly disclose file deletion and data compaction. Therefore, examiner believes Lopresti's disclosure anticipates the claimed reducing data in the files include at least one of file deletion, data compaction, document summarization, and file saving.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 4-6 and 10-14 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6298173 issued to Lopretsi, herein referred to as Lopretsi.

Referring to Claims 1, 12 and 13:

Lopretsi discloses a data storage device comprising: a data storage unit storing a plurality of files each having a plurality of attributes (col 3, lines 20-30; col 4, lines 40-60); a rule setup unit storing a ranking rule for ranking the files for each of the attributes (col 9, lines 15-20; Fig 13, col 9, lines 35-40); an assignment unit assigning reduction ranking to each of the files on the basis of ranking rules associated with the attributes (col 9, lines 55-65); and a reduction unit reducing data in each file according to the reduction ranking when a storage capacity of the data storage unit is insufficient for new data storage (col 2, lines 15-20; col 8, lines 10-15) and wherein said reducing data includes at least one of file deletion, data compaction, document summarization, and file saving (col 6, lines 55-65; col 8, lines 25-40).

Referring to Claims 10 and 11:

Lopretsi discloses a computer-readable recording medium recorded with a program for a computer, the program allowing the computer to perform: assigning reduction ranking to each of a plurality of files on the basis of ranking rules associated with attributes of the respective files

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(col 9, lines 55-65); and reducing data in each of the files according to the reduction ranking when a data storage capacity is insufficient for new data storage (col 2, lines 15-20; col 8, lines 10-15) and wherein said reducing data includes at least one of file deletion, data compaction, document summarization, and file saving (col 6, lines 55-65; col 8, lines 25-40).

Referring to Claim 14:

Lopretsi discloses a data storage method, comprising: ranking stored files using ranking rules that consider plural attributes (col 8, lines 30-35; col 9, lines 1-10); determining whether data storage capacity will be exceeded when a new file is to be stored (col 8, lines 1-15); reducing a storage space needed for a file with the highest rank until the new file can be stored; and storing the new file (col 8, lines 30-50) and wherein said reducing data includes at least one of file deletion, data compaction, document summarization, and file saving (col 6, lines 55-65; col 8, lines 25-40).

Referring to Claim 4:

Lopretsi discloses the limitations as discussed in Claim 1 above. Lopretsi further discloses an edit unit editing information stored in the rule setup unit (col 9, lines 15-30).

Referring to Claim 5:

Lopretsi discloses the limitations as discussed in Claim 1 above. Lopretsi further discloses a reduction ranking storage unit storing the reduction ranking of the files, and wherein the assignment unit determines the reduction ranking during an idle time in processing associated

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with the data storage unit and stores the reduction ranking in the reduction ranking storage unit (col 7, lines 45-60; col 8, lines 1-10; col 9, lines 1-10; 50-55).

Referring to Claim 6:

Lopretsi discloses the limitations as discussed in Claim 1 above. Lopretsi further discloses data storage unit includes a buffer area into which data is written temporarily when the storage capacity is insufficient, and the reduction unit reduces data in each file after data has been written into the buffer area (col 10, lines 9-12).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 6298173 issued to Lopretsi, herein referred to as Lopretsi in view of US 5276867 issued to Kenley et al.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Referring to Claim 3:

Lopretsi discloses the limitations as discussed in Claim 1 above.

Lopretsi does not explicitly disclose “the rule setup unit further stores weight information for each of the attributes, and the assignment unit calculates the total of the attributes of each file on the basis of the weight information and determines the reduction ranking of the files on the basis of the total of the attributes.”

Kenley discloses the rule setup unit further stores weight information for each of the attributes, and the assignment unit calculates the total of the attributes of each file on the basis of the weight information and determines the reduction ranking of the files on the basis of the total of the attributes (col 22, lines 50-60).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the teachings of Lopretsi such that each attribute is assigned a weight

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that is used to calculate a rank. One of ordinary skill in the art would have been motivated to do this because it would allow file reduction based on a total attribute weight (col 2, lines 60-65).

Allowable Subject Matter

5. Claims 2, 7, 8 and 9 allowed.

The following is an examiner's statement of reasons for allowance:

Referring to Claim 2:

The prior art neither singly nor in combination disclose a rule setup unit further storing application ranking of each of the ranking rules associated with the attributes, and the assignment unit applies the ranking rules in the application ranking order to determine the reduction ranking of the files. The application rank provides a mechanism for ordering the importance of attributes that are used to determine the importance of a file (Specification, page 10, lines 5-10).

Referring to Claim 7:

The prior art neither singly nor in combination disclose a restoration unit restoring a data-deleted file to the original file, and wherein the data storage unit stores a virtual file containing file information of the original file and link information that points to real data of the data-deleted file and the restoration unit restores the data-deleted file to the original file on the basis of information in the virtual file. The virtual file provides a mechanism for restoring files that have been reduced (Specification, page 21, lines 10-25).

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Referring to Claim 8:

The prior art neither singly nor in combination disclose an algorithm storage unit storing application ranking of a plurality of reduction processing algorithms, and wherein the reduction unit determines a combination of a reduction processing algorithm and a file whose data is to be reduced on the basis of the application ranking of the reduction processing algorithms and the reduction ranking of the files. The algorithm ranking allows the system to automatically rank the various reduction algorithms and based on the file type and algorithm rankings the system applies the appropriated reduction algorithm to a file. (Specification, page 18, lines 5-20).

Referring to Claim 9:

The prior art neither singly nor in combination disclose a data reduction speed storage unit storing data reduction speed for each of a plurality of combinations of a reduction processing algorithm and a file whose data is to be reduced, and wherein the reduction unit calculates a target reduction speed and makes a comparison between the target reduction speed and the data reduction speed stored in the data reduction speed storage algorithm and a file whose data is to be deleted. This provides a reduction for the processes that are applied to the files, thereby allowing a user to quickly obtain storage space (Specification, page 24, lines 23-25, line 25).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Prior Art

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5892847 issued to Johnson, Stephen G. Johnson discloses a system and method is disclosed that compresses and decompresses images. The compression system and method includes an encoder, which compresses images and stores such compressed images in a unique file format, and a decoder, which decompresses images. The encoder optimizes the encoding process to accommodate different image types with fuzzy logic methods that automatically analyze and decompose a source image, classify its components, select the optimal compression method for each component, and determine the optimal parameters of the selected compression methods. The encoding methods include: a Reed Spline Filter, a discrete cosine transform, a differential pulse code modulator, an enhancement analyzer, an adaptive vector quantizer and a channel encoder to generate a plurality of data segments that contain the compressed image. The plurality of data segments are layered in the compressed file to optimize the decoding process. The first layer allows the decoder to display the compressed image as a miniature or a coarse quality full sized image, the decoder then adds additional detail and sharpness to the

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displayed image as each new layer is received. The decoder uses optimal decompression methods to expand the compressed image file.

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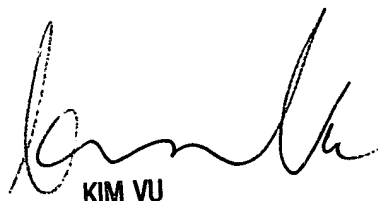
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monplaisir G Hamilton whose telephone number is (703) 305-5116. The examiner can normally be reached on Monday - Friday (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y Vu can be reached on (703) 305-4393. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Monplaisir Hamilton


KIM VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2135